



Application of individual programs for students' motor modes self-organization

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Abstract

Objective of the study was to evaluate the effectiveness of the application of individual programs for the self-organization of students' motor modes using digital technologies.

Methods and structure of the study. The study was carried out at the Belgorod State Technological University named after V.G. Shukhov 980 students aged 18-20 took part in the pedagogical experiment. Throughout the experiment, for all students in the CG and the EG, motor activity was regulated in their free time at the level of the daily minimum rate of motor activity of 10,000 steps per day. For this, a bot channel was used in the Telegram application. For the EG group, the channel-bot Telegram calculated and offered options for the missing physical activity after filling out the morning questionnaire, which indicated the planned physical activity for the day.

Results and conclusions. According to the data obtained, significant differences in Student's t-test between the CG and the EG were registered in all physical fitness tests. The greatest increase in indicators was observed in the EG in speed and speed-strength tests. The conclusion is made about the effectiveness of the application of individual programs for the self-organization of motor modes of students who used the Telegram-bot with programmed activity.

Keywords: motor activity, individual programs, self-organization of motor modes, students, Telegram-bot.

Introduction. The problem of students' hypokinesia becomes more urgent every year. Studies in this area show that university entrants come with poor health, have a low initial level of physical fitness and motivation for physical activity [1, 2, 4].

As the analysis of scientific publications shows, most of the works devoted to the study and increase in the level of motor activity of students are general studies on the methods of its determination, the mode of work and rest, the introduction of sports and recreational technologies into academic classes in physical culture and sports. However, these studies, although they represent a certain practical significance, do not contribute to the fulfillment of the normative indicator of physical activity [5, 6].

In our opinion, the most rational and effective solution to the problem of physical inactivity among students is the development of individual programs of motor activity using mobile technologies.

Objective of the study was to evaluate the effectiveness of the application of individual programs for the self-organization of students' motor modes using digital technologies.

Methods and structure of the study. In a pedagogical experiment, which took place at the of BSTU named after V.G. Shukhov, 980 students aged 18-20 took part.

In the course of the study, a channel-bot was developed in the Telegram application, which, based on the planned activity for the day, issues recommendations on the organization of motor activity to each user, and keeps a daily count of the number of steps taken [3]. Throughout the experiment, the daily performance by the subjects of the minimum norm of motor activity of 10,000 steps per day was monitored. If the subject during the week, at least twice, did not gain the daily minimum norm of physical activity of 10,000 steps per day, then his results were excluded from the



experiment. During the examination session, exceptions were made to this rule, since at that time the majority of students did not gain the daily minimum rate of physical activity. In connection with the above, at the end of the experiment, the results of only 220 students were taken into account (100 boys from the EG and CG, 50 people each, and 120 girls from the EG and CG, 60 people each).

For the EG group, the channel-bot Telegram calculated and offered options for the missing physical activity after filling out the morning questionnaire, which indicated the planned physical activity for the day. For the CG, the students determined the variants of motor activity themselves, so the subjects filled out only the evening report on the motor activity performed during the day.

Results of the study and their discussion. The dynamics of the test results within the control and experimental groups before and after the end of the experiment, as well as between the groups, is presented in Table.

Within the groups, according to the test results, significant differences in the Student's t-test in the EGm were recorded for most indicators, with the exception

of flexibility, and in the CGm there were revealed significant changes only in the flexion-extension test in the lying position.

At the end of the experiment, when comparing the results of physical fitness in the CGm and the EGm, significant differences were revealed by the Student's t-test in all tests, except for flexibility. In our opinion, this result can be explained by the lack of motivation in most young men to develop flexibility.

The girls of the experimental group showed significant differences according to Student's t-test for all tests. At the same time, in CGw, significant differences according to Student's t-test were recorded only in two control tests: lifting the body from a supine position and flexibility. No significant differences were found for other tests.

According to the data obtained, significant differences in Student's t-test between CGw and EGw were registered in all physical fitness tests. The greatest increase in indicators was observed in the EG in speed and speed-strength tests.

Conclusions. The obtained data on motor activity show that the students of the experimental and control groups performed daily locomotion norm of 10,000

Table 1. Change in indicators of physical readiness of students of experimental and control groups

Control tests	Group	Before, $X \pm m$	After, $X \pm m$	p	
				Within groups	Between groups
100 m run, s	EGm	13,81±0,12	13,04±0,13	*	*
	CGm	13,93±0,96	13,72±0,63		
	EGw	16,47±0,15	15,35±0,17	*	*
	CGw	16,77±0,16	16,02±0,11		
Standing long jump, cm	EGm	226,17±1,64	241,91±1,93	*	*
	CGm	227,81±1,72	230,55±1,25		
	EGw	187,07±1,04	198,66±1,03	*	*
	CGw	186,35±1,33	193,22±1,02		
Flexion-extension of arms in an emphasis lying, number of times	EGm	26,37±0,85	38,54±1,21	*	*
	CGm	26,85±0,88	31,06±0,98	*	
	EGw	8,18±0,34	12,94±0,46	*	*
	CGw	8,36±0,38	9,14±0,46		
Tilt from a standing position on a gymnastic bench, cm	EGm	11,94±0,45	12,91±0,38		
	CGm	11,75±0,42	12,63±0,41		
	EGw	15,45±0,32	22,50±0,33	*	*
	CGw	17,60±0,35	19,51±0,44	*	
Raising the body from a supine position, the number of times per minute	EGm	47,41±0,86	61,22±0,67	*	*
	CGm	46,73±0,82	49,01±0,79		
	EGw	42,71±0,48	57,43±0,97	*	*
	CGw	41,46±0,56	46,54±0,35	*	
Cooper test, m	EGm	2438,22±25,23	2809,03±20,47	*	*
	CGm	2424,12±25,09	2504,08±30,36		
	EGw	2103,48±15,35	2292,55±26,69	*	*
	CGw	2067,28±15,31	2095,11±17,46		

* - significance of differences according to Student's t-test ($p \leq 0.05$).



steps for eight months, excluding the time (January) of the winter session.

In the experimental group of girls, significant differences were recorded according to the Student's t-test for all tests, and for boys, also for all tests, with the exception of flexibility.

At the same time, it should be noted that in the control groups there were positive changes in physical fitness: the boys had significant differences according to the Student's t-test in the flexion-extension test in the lying position, and the girls - in the tilt from the standing position on the gymnastic bench and lifting the body from a supine position.

Thus, based on the results of the study, we can conclude that the individual programs for self-organization of motor modes of students using the Telegram bot with programmed activity are effective.

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